

Title (en)

Mechanical device for torque transmission from rudder to a flap by means of a bearings guide

Title (de)

Mechanische Vorrichtung zur Drehmomentübertragung vom Ruder an ein Flossenruderblatt über eine wälzgelagerte Längsführung

Title (fr)

Dispositif mécanique pour la transmission du couple du gouvernail à un volet à l'aide d'un guidage longitudinal

Publication

EP 1391380 A1 20040225 (EN)

Application

EP 03077326 A 20030724

Priority

IT GE20020077 A 20020822

Abstract (en)

The solved problem regarding the transmission of torque at low speed from a steering rudder (Q) to a flap (P), blade hinged to the rudder blade aft edge, all mounted on the aft side of a hull floating and moving in water. With a reduction of friction and so of wear, this mechanical device solves the above problem without using any other active steering gear (E) than the one of the rudder. This mechanical device functioning space portion is horizontal between the hull and vertical blades of the steering system. It is built up by: a rollers bearing (K) on the upper edge of the rudder blade with its vertical axis coincident with flap rotation axis (N), a rollers bearing (J) on the upper edge of the flap with its vertical axis positioned at about one third to the aft edge of the flap blade, a grooved beam guide (L) with the fore end constrained (keyed) to a vertical guide stock (G), after than the rudder stock (I). Part of the torque of the rudder stock is transmitted to the flap blade, it happens with the use of said two rollers bearings (K e J) with vertical axis, which shift into the grooved guide (L). During the rudder rotation the grooved guide, pulled by bearing (K), with rotation around (C), acts and pushes on (J) that get rotation to the flap blade. The rotation angle of the flap blade "Beta" is aparametric function of the "Alfa" angle of rotation of the rudder blade and parameters are the rotation arms (a,b,c) of rotation of the same mechanical torque transmission device. <IMAGE>

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CPC (source: EP)

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